

## REMARKS

The present application includes pending claims 1-29, all of which have been rejected. Additionally, claim 11 was objected to due to a typographical error, and claims 12-18 were also objected to by virtue of their dependency on claim 11. Claim 11 has been amended pursuant to the Examiner's recommendation to overcome this objection. The Applicant submits that the pending claims define patentable subject matter.

### I. Claim Rejections Under 35 U.S.C. § 112

Claims 1-10 and 19-29 stand rejected under 35 U.S.C. § 112, 2<sup>nd</sup> ¶, as being indefinite because they recite (or incorporate) an allegedly indefinite term, "chilled." Although the Office Action concludes that the term "chilled" is indefinite, the Office Action assigns the term a definite meaning. *See* Office Action at page 3 ("[T]he Examiner takes the position that the 'chilled' liquid is one in which the liquid is cooled to a temperature below that of the element it is intended to cool.") Independent claims 1 and 19 have been amended to explicitly incorporate the Examiner's definition.

### II. Claim Rejections Under 35 U.S.C § 103(a)

Claims 1, 6-7, and 9-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Innovative Technology Summary Report ("ITSR") in view of U.S. Pat. App. Pub. 2002/0181654 to Baertsch *et al.* ("Baertsch"), U.S. Pat. 5,299,249 to Burke *et al.* ("Burke"), and U.S. Pat. App. Pub. 2001/0017908 to Dilick ("Dilick"). Claims 2-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Burke, Dilick, and U.S. Pat. 5,185,774 to Klostermann ("Klostermann"). Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in

view of Baertsch, Burke, Dilick, and U.S. Pat. 5,226,064 to Yahata *et al.* (“Yahata”). Claims 11-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Yahata, and U.S. Pat. 5,310,361 to Muchowicz *et al.* (“Muchowicz”). Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Yahata, Muchowicz, and U.S. Reissue Pat. 35,025 to Anderton (“Anderton”). Claims 19-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Burke, Yahata, Dilick, and Muchowicz. Claims 25-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Burke, Klostermann, and Dilick. Claim 29 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Burke, Klostermann, Dilick and Yahata. The Applicant respectfully traverses these rejections for the reasons previously set forth during prosecution and those set forth herein.

A determination of obviousness depends on (1) the scope and content of the prior art; (2) the differences between the claimed invention and the prior art; (3) the level of ordinary skill in the art; and (4) any relevant secondary considerations, including commercial success, long felt but unsolved needs, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). When making a determination of obviousness or non-obviousness, the Supreme Court cautions:

a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. ... This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.

*KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007).

**A. The Proposed Combination Of References Does Not Render Claims 1, 6-7, and 9-10 Unpatentable**

Claims 1, 6-7, and 9-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Burke, and Dilick. In doing so, however, the Office Action employs hindsight to combine non-analogous art. Additionally, the proposed combination of references does not disclose all the elements of the claims.

**1. There Is No Suggestion or Motivation To Combine ITSR With The Other References**

ITSR relates to an industrial x-ray system, which deals with detecting heavy metals in ventilation ducts at U.S. Department of Energy (“DOE”) Complex facilities. *See* ITSR at p. 1. ITSR is not directed to cooling or powering medical imaging systems, as demonstrated by the following excerpt:

Ventilation ducts, piping, and process equipment in DOE Complex facilities contain an assortment of heavy metal contaminants. Uranium and plutonium are two of the more prevalent heavy metal contaminants. The presence of these heavy metals is hard to detect because alpha particles emitted from these contaminants are easily stopped by container walls. With the use of conventional survey instruments, low energy gammas emitted from these radioactive heavy metals can be measured. Although the presence of uranium and plutonium can be detected by passive gamma measurements, it is difficult to accurately quantify the amount of these contaminants using the passive gamma method. Different container geometries and varying wall thicknesses complicate, and ultimately degrade, the passive gamma measurements. The X-Ray, K-Edge Heavy Metal Detection System does not rely on gamma ray emissions from the holdup material and is capable of providing a quantifiable, non-destructive evaluation of containers with different geometries and wall thicknesses.

*See* ITSR at p. 2. A person of ordinary skill in the art of cooling and powering medical imaging systems would not be led to ITSR. Moreover, there is no suggestion within the other references or within the knowledge of skill in the art for a person of ordinary skill,

when attempting to solve the problem of cooling a medical imaging system, to look to an industrial x-ray system that is used for detecting heavy metals. The Applicant respectfully submits that ITSR is non-analogous art and the rejection is based on a hindsight reconstruction of the invention in view of the applicant's own disclosure. For at least this reason, the Applicant respectfully submits that the proposed combination does not render claims 1, 6-7, and 9-10 unpatentable.

**2. The Proposed Combination Of Art Does Not Disclose All Of The Elements Of The Claims**

**a) Dilick Does Not Disclose “an auxiliary module removably connected to said medical imaging device having a cooling unit”**

The Office Action relies on Dilick because it allegedly “teaches removably connecting to said imaging device through a connector that allows said auxiliary module to be disconnected from, and reconnected to, said medical imaging device”. Office Action at p. 5. The rejected claims however recite (or incorporate): “an auxiliary module removably connected to said medical imaging device ... having a cooling unit”. *See* Claim 1. Dilick merely describes connecting oil hoses for circulating “insulating oil” through an x-ray tube housing. *See* Dilick at ¶¶ 9 and 60. Although Dilick illustrates removable connections for these oil hoses in Figure 5, neither it, nor any of the other cited references, describes, illustrates, or discloses “an auxiliary module removably connected to said medical imaging device ... having a cooling unit” as recited in the rejected claims. For at least this reason, Applicant respectfully submits that the proposed combination of references does not render claims 1, 6-7, and 9-10 unpatentable.

**B. The Proposed Combination Of References Does Not Render Claims 2-5 Unpatentable**

Claims 2-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Burke, and Dilick “as applied to claim 1” and further in view of Klostermann. Thus, for the same reasons as set forth above with respect to claim 1, Applicant respectfully submits that the proposed combination does not render claims 2-5 unpatentable. More specifically:

- (1) ITSR is non-analogous art, and the rejection is based on a hindsight reconstruction of the invention in view of the applicant’s own disclosure; and
- (2) Dilick, alone or in combination with the other cited references, does not disclose “an auxiliary module removably connected to said medical imaging device ... having a cooling unit”.

**C. The Proposed Combination Of References Does Not Render Claim 8 Unpatentable**

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Burke, and Dilick “as applied to claim 1” and further in view of Yahata. Thus, for at least the same reasons as set forth above with respect to claims 1, 6-7, and 9-10, Applicant respectfully submits that the proposed combination does not render claim 8 unpatentable.

**D. The Proposed Combination Of References Does Not Render Claims 11-17 Unpatentable**

Claims 11-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Yahata, and Muchowisz.

As set forth above with respect to claims 1, 6-7, and 9-10, ITSR is non-analogous art to which a person of ordinary skill in the art would not be led. The rejection is based on hindsight reconstructions of the invention in view of the applicant’s own disclosure.

For at least this reason, Applicant respectfully submits that the proposed combination does not render claims 11-17 unpatentable.

Additionally, the proposed combination of art does not disclose all of the elements of the claims, as further described below:

**1. Yahata Does Not Disclose “an auxiliary module having a booster battery pack, . . . wherein said auxiliary module is separate, distinct, and removably connected directly to said medical imaging device”**

The Office Action asserts that Yahata “teaches a booster battery pack (5), wherein said booster battery pack is configured to be electrically connected to said medical imaging device”. Office Action at p. 10. The Applicant respectfully submits, however, that Yahata does not expressly or inherently describe “an auxiliary module having a booster battery pack... wherein said auxiliary module **is separate, distinct, and removably connected** (*i.e.*, capable of being disconnected and subsequently reconnected) directly to said medical imaging device” as described in claim 11 of the present application. Instead, Yahata describes a secondary battery unit that is electrically connected in circuit with a commercial power supply source, and a high power consumption unit, (e.g. an X-ray tube drive unit) such that the battery source is receiving a charge from the commercial supply source when not supplying power to the high power consumption unit.

[T]he **secondary battery unit 5A** is employed as the major power supply source to a high voltage transformer 11 via a chopper circuit 12 and a DC/AC inverter 13. As a result, the high DC power may be supplied from the secondary battery unit 5A during the scanning operation, and **this secondary battery unit 5A is charged from the single-phase commercial power source 1** during the non-scanning operation. Also, an X-ray tube 9 may be sufficiently driven by this battery unit 5A during the scanning operation.

*Id.* at column 5, line 67 – column 6, line 9; *see also id.* at Fig 1, items 1, 3, 5, 100 and column 2, line 63 – column 3, line 27.

Yahata describes a battery unit electrically connected with both the imaging device and the commercial power supply source. Yahata does not, however, expressly or inherently describe an auxiliary module having a battery booster pack that is “separate, distinct, and removably connected directly to said medical imaging device,” as recited in claim 11. For at least this reason, Applicant respectfully submits that the proposed combination does not render claims 11-17 unpatentable.

**2. Muchowicz Does Not Disclose “an auxiliary module having a booster battery pack, . . . wherein said auxiliary module is separate, distinct, and removably connected directly to said medical imaging device”**

The Office Action asserts that Muchowicz “teaches removably connecting to said imaging device through a connector”. Office Action at p. 11. Muchowicz discloses “a high voltage x-ray cable connection” that would allow two appropriate cables to be removably connected. Muchowicz at column 1, lines 45-50. Muchowicz does not, however, disclose an auxiliary module that is separate, distinct, and removably connected directly to said medical imaging device. For at least this reason, Applicant respectfully submits that the proposed combination does not render claims 11-17 unpatentable.

**E. The Proposed Combination Of References Does Not Render Claim 18 Unpatentable**

Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Yahata, and Muchowicz “as applied to claim 11” and further in view of Anderton. Thus, for at least the same reasons as set forth above with respect to claim 11, Applicant respectfully submits that claim 18 is patentable. More specifically:

- (1) ITSR is non-analogous art, and the rejection is based on a hindsight reconstruction of the invention in view of the applicant's own disclosure; and
- (2) neither Yahata, nor Muchowicz, taken individually or together, discloses "an auxiliary module having a booster battery pack, . . . wherein said auxiliary module is separate, distinct, and removably connected directly to said medical imaging device".

**F. The Proposed Combination Of References Does Not Render Claims 19-24 Unpatentable**

Claims 19-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Baertsch, Burke, Yahata, Dilick, and Muchowicz. As explained above, ITSR is non-analogous art, and the rejection is based on a hindsight reconstruction of the invention in view of the applicant's own disclosure. For this reason alone, Applicant respectfully submits that the proposed combination does not render claims 19-24 unpatentable.

Additionally, the Office Action relies upon Burke, Yahata, Dilick, and Muchowicz in the same manner as with respect to previous claims addressed above. Thus, for at least the same reasons set forth above, the proposed combination of references fails to disclose all of the elements of claims 19-24, and, therefore, does not render those claims unpatentable.

**G. The Proposed Combination Of References Does Not Render Claims 25-28 Unpatentable**

Claims 25-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Burke, Klostermann, and Dilick. As explained above, ITSR is non-analogous art, and the rejection is based on a hindsight reconstruction of the invention in view of the applicant's own disclosure. For this reason alone, Applicant respectfully submits that the proposed combination does not render claims 25-28 unpatentable.



Additionally, the Office Action relies upon Burke and Dilick in the same manner as with respect to previous claims addressed above. Thus, for at least the reasons set forth above, the proposed combination of references fails to disclose all of the elements of claims 25-28, and, therefore, does not render those claims unpatentable.

**H. The Proposed Combination Of References Does Not Render Claim 29 Unpatentable**

Claim 29 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ITSR in view of Burke, Klostermann, and Dilick “as applied to claim 25” and further in view of Yahata. Thus, for at least the same reasons as set forth above with respect to claim 25, Applicant respectfully submits that the proposed combination does not render claim 29 unpatentable.

Additionally, the Office Action relies upon Yahata in the same manner as with respect to previous claims addressed above. Thus, for at least the same reasons set forth above, the proposed combination of references fails to disclose all of the elements of claim 29, and, therefore, does not render that claim unpatentable.

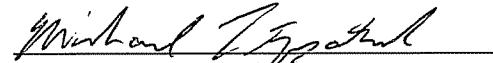
**VII. Conclusion**

The Applicant respectfully submits that the pending claims of the present application should be in condition for allowance for at least for the reasons discussed above and request reconsideration of the claim rejections. If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited to contact the undersigned attorney for the Applicant. The Commissioner is authorized to charge any necessary fees or credit any overpayment to the Deposit Account of McAndrews, Held & Malloy, Account No. 13-0017.

Respectfully submitted,

Date: December 19, 2007

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